

AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

"O fortunatos nimium sua si bona norint
Agricolae." . . . VIRG.

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AGRICULTURE.

REMARKS.

ON THE IMPROVEMENT OF CATTLE, &c.

In a Letter to Sir John Saunders Sebright, Bart. M. P.
by Mr. John Wilkinson, of Lenton, near Nottingham.

Let each succeeding race employ your care,
Distinguish which to slaughter, which to spare;
Mark well the lineage,—let the purest make,
From purest blood, its just proportions take.

Having read, sir, your valuable treatise on the improvement of live stock, in a letter addressed to Sir Joseph Banks, that great patron of all science; I have taken the liberty to enlarge upon some of your observations, and to offer to your consideration such fresh matter as appeared to me of importance to the subject. And this I have been encouraged to do, not only on account of the great pleasure you always take in questions of this nature; but also, because many of your assertions are corroborated by my own experience.

It has always occurred to me, that in order to understand the true art of breeding, we must have recourse to first principles; and that it will be easier to show how any improved breed may be continued, when we have previously shown how it was first formed.

In the following remarks, I shall confine myself chiefly to neat cattle, as being that species of animal with which I am more particularly concerned; but it will be easy to perceive that the observations there advanced, will be applicable, in a greater or less degree, to every other kind which is destined to be the food of man.

Whether the different breeds with which we are now acquainted, descended originally from one common stock, the wild Bison, is a question, I think, hard to be determined. Of this, however, we may be assured, from the very nature of the case, that the distinct breeds at first, if more than one, could have been by no means numerous; so that the great variety which we behold at present, is owing to food, to climate, or to other collateral and accidental circumstances. And perhaps of all the causes contributing to this multiplicity, none would be more effectual, than the hidden springs of nature itself. For though we perceive that there is a strong tendency, for like to produce like, as it is usually termed: yet he that is at all conversant with nature, must perceive also, that there is a certain tendency to change. And this law of nature would soon be assisted by man, who is ever fond of novelty; and delights in diversity, even for its own sake.

Thus then, we have seen, that distinct breeds might readily be formed by the joint efforts of nature and of art; nor will it be more difficult to perceive how they might afterwards be improved. That all would be capable of improvement is too obvious to need discussion. For no one can behold any breed whatever in its more natural and less improved state, without perceiving a great variety in the shapes of individuals, their different degrees of tendency to feeding, or certain other remarkable properties, which might give to some a decided superiority over the rest. These, therefore, must be selected from the whole herd; and as you yourself, Sir, have remarked, the male and female be properly matched. When we come to their progeny, some will probably be worse, some equal to, and some even better, than the parents themselves. The worst must unquestionably be rejected, while the rest, and especially the best of these, are carefully to be preserved for future stock. And

thus by a judicious selection of male and female, and discarding every thing that is refuse, we must continue to proceed. And by such procedure, animals have at length been produced, so different from the generality of the stock from whence they were originally taken, that none but such as are well acquainted with these matters, could have any idea, that there existed between them the least affinity. The distinction indeed between some, and their own particular variety, has scarcely been less, than the distinction between that variety and the whole species. The longer also these perfections have been continued, the more stability will they have acquired, and the more will they partake of nature itself. As to the leading properties which may constitute the excellence of any breed, or of any particular family belonging to that breed, I shall next inquire.

And first with respect to form; in which case I shall give, what I conceive to be the most important points for the true symmetry of Neat Cattle in general. These are as follows.

The head ought to be rather long, and muzzle fine: the countenance calm and placid, which indicates a disposition to get fat; the horns fine: the neck light, particularly where it joins the head; the breast wide and projecting well before the legs; the shoulders moderately broad at the top and the points well in, and when the animal is in good condition, the chine so full as to leave no hollow behind them; the fore flank* well filled up, and the girth behind the shoulders deep; the back straight, wide, and flat; the ribs broad, and the space between them and the hips small; the flank full and heavy; the belly well kept in, and not sinking low in the middle; † the whole forming, not a round or barrel like carcass, as some have expressed it, for this would leave a deficiency both in the upper and lower part of the ribs; the hips globular, wide across, and on a level with the back itself; the hind quarters, that is from the hips to the extremity of the rump, long and straight; the rump-points fat and coming well up to the tail; the twist wide, and the seam in the middle of it so well filled, that the whole may very nearly form a plane, perpendicular to the line of the back; the lower part of the thigh small; the tail broad and fat towards the top, but the lower part thin; the legs straight, clean, and fine boned; and when the animal is in high condition, the skin of a rich and silky appearance.

These appear to be the most material points for the formation of true symmetry in Cattle; there are others of a minor consideration, which will readily be suggested by attention and experience; but I did not think it necessary to mention them here.

Many of the most important of the foregoing properties, may be expressed in the following stanzas, as descriptive of a beautiful Cow; and since verse is frequently found to assist the memory, I have therefore inserted them thus:

She's long in her face, she's fine in her horn,
She'll quickly get fat, without cake or corn;

* The fore flank is the lower part of the side immediately behind the fore legs.

† Perhaps the nearest description that can be given, of the carcass, would be to say, that a section of it (made by a plane passing through its middle, in a direction perpendicular to the line of the back) ought nearly to resemble an oval, whose two ends are of the same width, and whose form approaches to that of a circle; or (to those who understand the nature of the figure) an ellipse, whose eccentricity is not great.

She's clear in her jaws, and full in her chine,
She's heavy in flank and wide in her loin.

She's broad in her ribs, and long in her rump,
A straight and flat back, with never a hump;
She's wide in her hips, and calm in her eyes,
She's wide in her shoulders, and thin in her thighs.

She's light in her neck, and small ‡ in her tail,
She's wide in her breast, and good at the pail;
She's fine in her bone, and silky of skin,
She's a Grazier's without, and a Butcher's within.

Should any difficulty still remain in forming a clear conception of the points described, I think in such a case, I may very safely recommend a Print which I published a short time ago, and that too, without vanity; as it reflects far more credit on the artist, than on myself. In such a recommendation moreover, I feel the greater confidence, both because I was requested to publish it by many of the first agriculturists in the kingdom; and since published, it has met with their highest approbation. This print consists of a groupe of five animals, so arranged as to show the just proportion and proper symmetry of every essential part. The Portraits were taken from the most perfect animals in my possession; and the Engraving, which is in a style far superior to that in which Cattle are generally executed, was finished with the greatest care. And if I am correct in my description for the proper formation of Cattle, and the portraits in the above-mentioned Print be also good; I think he who carefully compares the Portraits with the description itself, cannot long fail of being, at least, a very tolerable judge. For any one reading the description of a particular part, as for example, of the breast: he will there find, that it ought to be wide, and to project well before the legs; and on turning to the Print, he will immediately see this projection shown in the side view of the Bull, and the width in the Heifer which faces him; and so on, with respect to every other part. For as each animal is placed in a different position from the rest, there is no important point which is not fully presented to the view. §

In the description which I have given for the formation of Cattle, I have said that the carcass ought not to be round or to approximate to the form of a barrel, as some have described it; and have offered a sufficient reason why this should not be the case. Whoever indeed takes such a form for his model, would quickly be told by a judge, that the animal was not deep enough in its sides. I have, moreover, described the countenance as calm and placid, instead of speaking of the boldness of the eye; the reason of which will easily be discovered by a person of your singular penetration. For the boldness of the eye is frequently caused by a restless or vicious disposition; but a quiet and a docile look denotes evenness of temper, so essential to quick feeding. And we have only to consider the nature of animals in general, to perceive that this quiet disposition which I have been describing in Cattle, and which in Man

‡ This epithet alludes to the lower part of the tail only, the higher part ought to be broad, according to the former description.

§ This Print, which has already been honoured with many of the greatest and most respectable names in the country, may be had of Mr. Orme, 59 Bond Street, corner of Brook Street; of Mr. Wm. Allen, Dame Street, Dublin; of Mr. Barnett, Nottingham; or of Mr. Wilkinson, of Lenton.

N. B. It may be seen at the Editor's Farm House at Bovally.

might be termed indolence, has a strong tendency to make the eye appear small, rather than bold and large. Let any one for instance, observe another whose mind is at rest from attention to outward objects; the muscles of the eye lids relax, and the lids themselves come closer together, in which case, the eye necessarily assumes a smaller appearance; and the contrary takes place when our attention is again excited. I must remark, however, that an animal which possesses naturally every essential for quick feeding, and whose countenance indicates that disposition by the mildest appearance, may have this appearance altered by ill treatment or other accidental circumstances. I observed that the lower or bony part of the tail ought to be thin, but the upper part broad. The tail has too often been designated by the former appellation only, which is incorrect in the description of a good animal. For on the upper part of the tail of one that is in tolerable condition, there ought to be a considerable quantity of fat; but as the lower part consists chiefly of bone, it ought to be thin; and will always be so, when the animal itself is a small boned one. Perhaps some may think, that the two latter observations, namely with respect to the countenance and the tail, are of but little consequence; since however, these signs generally accompany a good animal, they ought not to be passed over: the latter is an invariable attendant; and the former naturally so, but may sometimes be altered by adventitious circumstances, as has already been observed. It is one thing to be able merely to distinguish in the gross between a good and a bad animal; but another and a far more difficult one, to be able to point out every defect however trifling, and to discover every excellence. And yet no man can arrive at any great degree of perfection in the art of breeding without making this latter kind of knowledge his chief aim and most ardent study.

Some breeders have asserted, among whom was Mr. Bakewell himself, that a disposition to get fat was necessarily combined with a shape similar to that I have been describing. The truth of this may very justly be questioned; and the examples so well chosen by yourself, prove that the above-mentioned properties are not even invariably found together. Had they said with you, Sir, that "this particular formation generally indicates a disposition to get fat," they would have been borne out in their assertion by the fact itself; for it must be observed, that it is one thing to say, that two qualities are necessarily combined in the same subject; and another to say, that they are invariably found together. And if this latter term would have been too strong for the occasion, and that it would, we have already seen: how much rather ought the former to be rejected? It is frequently no easy matter indeed, to determine whether two qualities are necessarily combined; nor in the question before us, is it at all necessary. For if the quickness of feeding generally accompanies this peculiarity of shape (and that it does, it can never be denied,) that alone would surely be a sufficient reason for a preference to this form; to say nothing of its other and great advantages with respect to the weight of the animal, the laying on of the flesh in the prime parts, &c. &c. Perhaps these gentlemen had no design to mislead us, but were not sufficiently careful in the choice of their language. It is material, however, that we should not only have clear ideas ourselves, but also, that we should convey them to others in the most explicit terms. And in treating on any subject, we ought always to state things as they are actually found to be, and not as we might wish them.—One satisfactory reason, I think, we may easily discover, why the best feeders are most frequently found amongst those animals, that at the same time possess the best shapes. For without making the former a necessary consequence of the latter; those breeders that had skill enough to select cattle of the most perfect symmetry, would also have skill enough to select out of these the best fleshed ones. For my own part I would not keep an animal that had a bad quality of flesh, if the form were perfection itself. The observation which Dr. Jenner made to you, "that no animal whose chest was narrow could easily be made fat,"

is a fact borne out by almost universal experience; and I believe is satisfactorily accounted for on natural principles. For the chest being too narrow, there is want of sufficient room for the proper action of the internal organs.

The form that I have already described, is not only the best for affording the greatest weight to the animal, but the flesh is also chiefly laid on, in what is usually called, the prime parts.

I have just had occasion to speak of goodness of flesh, but how to describe this quality in any thing like adequate terms, is a thing extremely difficult.—Some persons of great experience, would very rarely be wrong, judging by the sight only. But the best method of discovering it, is by the touch: and it has a richness, a mellowness in the feel.

Here it may be very necessary to caution the inexperienced against a certain description of animals, usually called light fleshed ones. And of these, there are too many in the hands of some breeders, not altogether destitute of eminence. The objection to such, is not on account of the quality of the flesh as regards richness, but the deficiency of its quantity when the animal is in a lean state. I have known such highly approved by some, when shown to them alive and made very fat, but this has certainly been for want of better judgment; and had the same persons been able to distinguish between fat and lean, they must have drawn a very different conclusion. This kind is profitable, neither to the grazier, nor yet the consumer. They are not profitable to the grazier; because in the first place, they are naturally tender—and moreover, they carry so small a quantity of flesh in their lean state, that they have much to do, when put to feeding, before they come to any tolerable weight. Neither are they profitable to the consumer; for fat without lean is of no other use, than to be wasted in the kitchen. Whenever they are found in the hands of a Breeder, it is generally in the hands of such as are in the habit of keeping their stock remarkably high; and when they are sold, and fairly kept as store stock, they bring a considerable loss to the purchaser, and disgrace on the original possessor. It is to be hoped indeed, that this kind of animal will soon be exploded in Neat Cattle, as it has been long ago in the new Leicester Sheep.* Of this we may be assured, whenever a stock is generally known to be of this description, the Breeder himself will soon fall into disrepute.

There is another kind which carry plenty of lean flesh, but of a bad quality. These are invariably slow feeders; and may always be discovered by the touch, the flesh being naturally hard. Some of these are so bad, that when put to the best keeping and continued at it ever so long, they will scarcely have a stone weight of fat, either within or without.

The perfection of breeding, as far as flesh is concerned, is a great quantity of rich lean flesh in the first instance, which when the animal is well kept, will soon be covered with a proper proportion of fat. And such not only take a shorter time in preparing for the stall than any other; but their beef will also sell for more a pound; being of the very first quality, and the kind that is eagerly sought after for the tables of our nobility and gentry. It is not here meant that this kind can never be made too fat; they may be very much so, this however can always be prevented by the time allowed for feeding.

In a word: it is not the animal which has scarcely any flesh, when at store keeping, and which when fed, will consist almost of fat alone, which is the most profitable either to the grazier, or yet to the

* I have here been misunderstood by one gentleman, who supposed I was speaking against the breed of new Leicester sheep; whereas I was only speaking against a particular variety of this breed; namely, light fleshed ones; a sort which had been introduced by some, but were soon rejected by all good judges. As to the breed itself, my opinion may be best ascertained, by saying it is the kind I have always kept. I do not here, however, mean to speak against any other breed whatever, as different kinds may suit different situations.

consumer; nor is it the animal, whose flesh is ever so abundant, if hard and bad, and incapable of having its proper quantity of fat; but it is that, which when at store pasturage only, carries a great quantity of rich lean flesh, and which by good keeping, may be made as fat as we please. And of these three sorts of animals, I think the first nearly as unprofitable as the second, notwithstanding the injudicious praise they sometimes meet with.

Having already treated on those two important qualifications, good symmetry with richness of flesh, I shall now controvert a hackneyed assertion, that a great tendency to feeding is incompatible with a great tendency to milking. And here I shall observe first, that there seemed to be no reason to draw this conclusion before the fact was ascertained by experience; and secondly, that the experience of some in the present day proves the assertion untrue.

In the first place, then, it may be remarked, generally that tendency and effect are two very different things; that a tendency may exist, when its effect is wholly or partly destroyed by some other counteracting cause, that when the effect of such counteracting cause can be removed, the other cause may be wholly productive. If it were assumed, therefore, (for I am now speaking independent of the experience I shall afterwards advance) that a cow, while giving a great quantity of milk, cannot possibly keep herself in good condition; because so great a portion of the food being converted into milk, the carcass could not properly be supported; yet I think it would be a rash conclusion, to infer from hence, that the same animal could not have a great tendency to get fat; and that when dried of her milk, this tendency might not soon produce its corresponding effect: for the effect of the milking quality having then ceased, the other cause, namely, the tendency to feeding, would remain unopposed in its effects, and be wholly operative. The assumption, however, here mentioned, ought never to have been made: as well might it have been contended by those who had seen only a bad race of hard fleshed animals, that there were therefore no other kind, that would produce a much greater quantity of beef from a given quantity of food.

But, secondly, to come to matter of fact, and to speak from experience itself. Some animals have the power of obtaining a greater degree of nourishment from a given quantity of food, than others of an inferior description; and, therefore, though some of the former may give a larger quantity of milk than the latter, yet their carcasses also, may, at the same time, be better supported. And I have frequently found cows that are great milkers, to keep themselves at the same time in high condition, to feed with the quickest despatch when dried of their milk, and whose descendants will arrive at the earliest maturity; a practical proof that a great tendency to feeding is not incompatible with a great tendency to milking. Those also who are anxious to witness the same thing, may have it shown to them when they please, as many such animals can be produced.

I suspect the assertion here controverted, originated not so much with those who have done nothing towards the improvement of cattle, as with those who have been content with doing but little. These latter being anxious to sell before they had sufficiently improved their own breeds, asserted, and asserted truly, that where cattle are to be bred for the slaughter, it is of more consequence to have them early feeders than great milkers. Of this I have no doubt; for, if only one of these properties could be obtained, I am fully persuaded, that the former would be more advantageous than the latter. But if, on the contrary, both can be combined, and that they can, I am convinced by experience: we shall not think very highly of those breeds which possess but one of them. For, who that is conversant in these things, does not know the great difference between the value of the produce of two cows, the one a good, and the other a bad milk-er, if we take that produce for one year only? I shall not here mention the great quantity of milk that some of my own cows have given, and the short time that it has afterwards required to feed them, lest it should seem to partake of an air of boasting.

When we consider the skill, the perseverance, and the capital required to improve a breed in the carcass only, it is not surprising that so few have attempted it and when we consider, that the union of great milking with quickness of feeding, required a two-fold labour, we might almost wonder that it has been undertaken at all. But yet, sir, whatever difficulties may lie in the way, every Breeder who aims at superiority, must follow that excellent advice which you have given; and with respect to which, I cannot do better, than quote your own words. "We should therefore, endeavour to obtain all the properties that are essential to the animals we breed." And this rule was surely practicable in the case before us; by selecting those animals that were the most perfect in point of form, in quality of flesh, and so on; and again by selecting out of these the very best milkers, using in other respects the same care as I have mentioned in a former part of my letter. Such a procedure in the formation of a breed, clearly adds very considerably to the expense in the first instance; but the advantages afterwards derived are more than a sufficient compensation, as the property of milking is inherited as readily as that of peculiarity of shape.

(To be continued in our next.)

CONSTITUTION AND BY-LAWS

OF THE

PENDLETON FARMERS' SOCIETY,

Together with the Letters and Papers which have been read before the Society at its various meetings.

Article 1. The Society shall be styled, *The Pendleton Farmers' Society*.

Art. 2. The objects of the Society shall be the promotion and improvement of Agriculture and Rural Affairs. Their attention shall be confined to these objects.

Art. 3. A President, Vice President, Secretary, and Treasurer, and a Corresponding Secretary, shall be annually elected, by a majority of the members present, at the anniversary of the Society, the second Thursday of June in each year. The persons elected to continue in office one year, and until a new election takes place. In case of vacancy by death, resignation, or otherwise, the same may be supplied by a new election, made at any stated meeting of the Society; the person elected to serve the remainder of the year.

Art. 4. At all meetings of the Society, the President shall exercise all the usual duties of that office. All motions shall be addressed to him, and on all questions he shall collect and declare the votes. He shall have power to call special meetings, by giving public notice of six days. In his absence the Vice President shall exercise the same powers. A quorum for business shall consist of the President or Vice-President, and at least four members.

Art. 5. The Treasurer and Secretary shall keep the books and papers of the Society, and the accounts regularly stated. At the meeting previous to the anniversary, he shall produce his accounts fairly stated, books and papers, and deliver them to his successor, on the anniversary, or to the order of the Society.

Art. 6. The Corresponding Secretary shall have in charge all letters addressed to the Society, and answer the same under their direction, which letters and answers he shall keep regularly filed.

Art. 7. The stated meetings of the Society shall be on the second Thursday of each month of each year.

Art. 8. The members of the Society shall be distinguished into resident, honorary, and contributing members.

Resident members shall consist of persons residing within the district. All members of Agricultural Societies in other states and countries, with whom this Society shall correspond, and all persons of this state and of other states and countries, who shall be elected for the purpose, shall be honorary members; and are hereby invited to assist at the meetings, whenever they come within the district. Strangers who desire to be present, as auditors, may be introduced by a resident member.

Honorary contributing members, are of the description hereafter mentioned. Every citizen contributing and paying into the hands of the Treasurer a sum not less than ten dollars, may be elected, agreeably to the rules, an honorary member, without regard to place of residence. Those who thus laudably enable the Society to extend its usefulness, and promote its objects, are invited to assist at its meetings. They will be styled honorary contributing members.

Art. 9. New members, whether resident or honorary, shall be elected by ballot, in their absence; application on their behalf shall be made to the Society at a stated meeting previous to their election. Three negatives shall be sufficient to reject a member proposed.

Art. 10. For the purpose of defraying the necessary expenses of the Society, for premiums and prizes, books on agriculture, improved instruments of farming and other important objects, every member shall annually pay into the hands of the Treasurer, on the anniversary, the sum of one dollar and a half, at the close of which said meeting, the Treasurer elect shall lay before the Society a list of the members, specifying who have and who have not paid their contributions. No part of the Society's funds shall be disposed of except at a stated meeting, of which notice shall have been given at a stated meeting previous.

Art. 11. New rules or alterations shall be proposed, and the proposal entered on the minutes, at the stated meeting preceding the anniversary, and may then be made by not less than two-thirds of the members present.

RULES AND BY-LAWS.

Rule 1. At all meetings of the Society, the President shall take the chair, and call the members to order at 11 o'clock.

2. Every member wishing to move a resolution, shall reduce it to writing, and address the chair standing. No resolution is to be open for discussion until seconded, but the mover may state reasons for any preliminary observations, not touching the merits of his resolution, before it is seconded.

3. No member shall be allowed to speak more than twice on any one subject, without permission of the Society.

4. In all cases every member shall rise and address the chair uncovered; the member first up shall have the precedence. The President shall confine the attention of the Society to the member speaking, and not suffer him to be interrupted in any manner whatever.

5. In cases of more than ordinary interest, the Society may go into a committee of the whole, on the requisition of any five members; when the President shall nominate a chairman, who shall preserve the same order and decorum, and cause the same rules of debate to be observed, with the exception of the third rule.

6. The previous question may be moved and seconded at any state of the debate, in committee of the whole, and shall be in the following words: "Shall the main question be now put?" Should the committee decide in the affirmative, the main question shall be put immediately, without debate.

7. Whenever a resolution has been disposed of by a vote of the Society, it shall not be in order to move that, or a similar resolution during the meeting, without a vote of the Society to re-consider.

8. Every member of the Society who shall violate any of these rules, or who shall not conduct himself with propriety and decorum, both of language and manner, shall be called to order by the President or Chairman, and if necessary, be directed to resume his seat.

9. In cases of gross, scandalous, violent, ungentlemanly conduct, the Society may expel a member. The resolution for this purpose, must be signed by two members, who will hand it silently to the President, who is bound not to disclose their names, and who is to request the member to withdraw. After debate, the member named shall be introduced, and

informed by the President of the substance of the charges, and required to make his defence after he return, either at the moment, or at the next stated meeting. When a vote is taken, it shall be by ballot, and it shall require two-thirds of the meeting, which shall consist of at least one fourth of the resident members, to expel a member.

10. All applications for admission to this Society, and all resignations, must be made in writing; and any resident members leaving the district, shall be entitled to continue honorary members.

11. The resident officiating Ministers of the Gospel of this district, shall be entitled to be resident members of this Society, free of contribution.

12. All members, and all persons who shall hereafter become members of this Society, shall sign the Constitution and these Rules.

JAMES C. GRIFFIN, *President*.

JOSIAS D. GAILLARD, *V. President*.

ROBERT ANDERSON, *Sec'y & Treas'r*.

JOSEPH V. SHANKLIN, *Corres. Sec'y*.

HONORARY MEMBERS.

Gen. Tho's Pinkney, St. James Santee; Hon. William Lowndes, Charleston; C. C. Pinkney, jr. do.; R. S. Izard, Esq. do.; J. R. Pringle, Esq. do.; Dr. J. Noble, do.; Gen. D. E. Huger, do.; Hon. J. Calhoun, Washington City; Col. J. B. Ion, St. James Santee; Col. L. J. Alston, St. Stephens, Alabama; Rev. Dr. Waddell, Athens, Georgia; Gen. John Blasingame, Greenville; D. P. Hillhouse, Washington, Georgia; Dr. Isaac Auld, Edisto Island; Dr. C. M. Reese, Philadelphia.

RESIDENT MEMBERS.

1815.—T. Pinckney, jr. J. L. North, And. Pickens, Benjamin Smith, John Miller, sen. Charles Gaillard, John E. Colhoun, J. T. Lewis, Thomas L. Dart, J. B. Earle, C. W. Miller, Samuel Cherry, John Taylor, James C. Griffin, Robert Anderson, William Hunter, Benjamin Du Pre, sen. Joseph Grisham, L. McGregor, Samuel Earle, Richard Harrison, Patrick Norris, J. C. Kilpatrick, Joseph B. Earle, T. W. Farrar, Thomas Stridling, John Green, Josias D. Gaillard, Joseph Van Shanklin.

1816.—John Maxwell, B. F. Perry, William Hubbard, E. B. Benson, George Reese, sen. George W. Liddell, J. B. Perry, John Martin, T. Farrar, W. R. Davis, William Gaston, Joseph Reed, Elam Sharpe, D. Sloan, jun. Samuel Warren, Leonard Simpson, Major Lewis, Samuel Taylor.

1817.—William Steele, James Lawrence, Francis Burr, John Hunter, W. S. Adair, William Taylor, William Anderson, Joseph Mitchell, Thomas Lorton, Rev. James Hillhouse, Benj. Dickson, Richard Lewis, J. T. Whitefield, J. B. Hammond, John Holbert, Robert Lemon.

1818.—John Hall, David Cherry, John Gaillard, Charles Story, M'Kenzie Collins, George Taylor, Theodore Gaillard.

1819.—Samuel Gassaway, R. A. Maxwell, J. P. Lewis, F. W. Symmes, George Reese, jun. Joseph Whitner, James Faris, Wm. Oliver, James O. Lewis, Thomas Sloan, Henry M'Crary, David K. Hamilton.

ADDRESS TO THE FARMERS' SOCIETY.

Permit me, gentlemen, briefly to call your attention to the objects of this institution; to present in a few words its vast importance to our country generally, and to this section of it in particular; and I know not how I can more plainly and forcibly express myself, than by stating the situation of other sections of our happy country, which formerly were in our present condition, but which are now advanced to a century before us in agricultural knowledge. A learned and judicious farmer of our sister state of Pennsylvania, describes the state of agriculture after the conclusion of the former American war, as wretched in the extreme. Their lands were exhausted by a constant succession of grain crops, and then abandoned to weeds, as worthless. New land was cleared, and the same miserable system pursued. Man and beast suffered alike, as the forage for the latter was supplied from the scanty crops of the farmer, or the poor

animals fed on dry straw and the scanty pickings of the fields. Animal life was barely sustained through the winter, and that with difficulty. Does this sad picture present to your minds no home reflections? Does not a striking similarity of situation present itself? From this unfortunate state of daily struggle for support, they were relieved by a few intelligent men; who united in a society for agricultural improvement. Such as we now form, have, by their judgment, zeal, and agricultural knowledge, diffused so much instruction to the intelligent farmer, as to convert his barren land into fertile soil, and to substitute the wine and oil of abundance for the miseries of poverty and starvation.

This happy change, however, was not effected in a day. They had to contend with the prejudices of ignorance, and the obstinate and blind perseverance in bad habits of those who pretended to agricultural skill. They pursued their career with unwearied step, undismayed by the difficulties which presented themselves, till they finally placed the agricultural interests of their country on a footing seldom equalled and not exceeded by any on this continent.

Such, gentlemen, is the successful career of the Philadelphia Society for the promotion of Agriculture, aided by similar societies in Pennsylvania. And who will not say that they merit the lasting gratitude of their country? We are accustomed to consider men of a different character as great and illustrious. The actions of Cæsar and of Scipio, of Marlborough and Eugene, or in latter times of Bonaparte and Blücher, entitle them in modern phrase, to be called great. But these men derived this title from their proficiency in destroying their fellow men. Their fame, like the pestiferous fumes of the charnel house, arises from the gore of mortals like themselves. It is steeped in blood, and is accompanied by the groans and shrieks of millions. Far different and how far preferable, is the character of the scientific and industrious agriculturist. He is the benefactor of his fellow men; his talents and his labours are devoted to the support and happiness of mankind. They make man intelligent and independent. They teach him to derive his wealth and respectability from the fruitful bosom which nature's God assigned us for this purpose; and his efforts, unlike those of the horrible traffickers in human blood, confer a lasting benefit, not only on his contemporaries, but on posterity.

We may justly conclude then, that as war and warriors are the curses, peace and agriculture are the blessings of the world.

In a national point of view, we have every inducement that can operate on a well organized mind, to stipulate our exertions. Living under the happiest and freest government in the civilized world; protected by mild laws, in the enjoyment of every right not incompatible with the equal rights of others: it is the duty of allegiance; it is the duty of gratitude; it is that duty, which love of country imperiously dictates, that every citizen should contribute his utmost efforts, to place his beloved country on the pinnacle of national prosperity. Our citizens, of all professions, should unite in this glorious effort, and it is confidently believed that the effort will ensure its success. In other pursuits our citizens have established and sustained a national character, not exceeded in the old world. Our statemen are decidedly superior. In the learned professions of law and physic, we exhibit a splendid specimen of American intellect. Our naval heroes, by their valour and skill, and honourable humanity, have extorted the plaudits of an admiring world; and our armies have lately proved themselves superior to the boasted discipline of Europe. Even in agriculture, some of our sister states have attained a proficiency highly honourable to themselves, and promotive of their permanent wealth and prosperity. Why then are we so far behind them? Why does not their patriotic example influence our conduct? Are we made of inferior materials? Are we not fostered by the genial warmth of the same political atmosphere? Or has our wayward fortune thrown us on a sterile rock, incapable of improvement? None of these obstacles exists. Our dis-

trict has emerged from the infancy of its settlement, while our agricultural knowledge is yet in the cradle. Let me not be told that this torpor proceeds from local causes: That our numerous water courses are obstructed by rocks, and that we shall find no vent for our increased productions. The answer is obvious. The superficial barriers which nature has thrown in our way, only to stimulate our exertions, are not removed, simply because their removal has not yet been necessary. But once increase your productions; double them, quadruple them, and they will not be dammed up at home; but like our swollen streams, they will burst with irresistible impetuosity through the rocks and barriers which impede their course to market. This is the natural course of events. The connexion between this district and the commercial sections of our state will be facilitated, and we shall obtain in exchange for our flour, our corn, our tobacco, and our beef and pork, such articles as our necessities may require, at reduced prices.

Do we want the evidence and authority of the best and wisest men in our republic, as to the importance of agricultural knowledge to our country? It is at hand. Washington, acknowledged by an admiring world to be the greatest man of the age, "the first in war, the first in peace, and the first in the hearts of his countrymen," was, himself, an agriculturist. He inculcated by his precepts, and enforced by his example, the principles and practice of agriculture, as intimately connected with the welfare of that country to which he has left so many proofs of his devotion. Mr. Jefferson, on this subject, has ably seconded the example of his predecessor. He has been personally instrumental in establishing agricultural societies, and has given us much valuable information. It is needless to multiply examples, almost every distinguished citizen of our country, however they may have differed on other points, have united in opinion, that a successful system of agriculture is the basis of our prosperity; that it is the foundation of commerce; that it strengthens the federal bond of union; that it increases the actual value of our country; that it enlightens our citizens, as to its numerous blessings; that it diffuses knowledge, and thereby strengthens a good government, "which is never in danger, while a free people are well informed." If these opinions of our best men be correct, (and what sceptic can hesitate to believe them,) does it not behove us to assist in this fair and goodly work, whose object is so all important, whose means are so much within our reach. But I deem it useless to address a further argument to you, gentlemen, on an interesting subject, on which the existence, and wealth, and permanent prosperity of our country so essentially depends: I will merely suggest a few measures, which appear to me to be calculated to promote the object of our infant, but already respectable institution.

I propose, in the first place, that our Corresponding Secretary be directed to open a correspondence with the Philadelphia Society for the promotion of Agriculture, informing them of our institution, and its objects, inviting their assistance and information, as to the means of procuring the best samples of seeds and grain, particularly wheat, the time and mode of sowing it, the preparation of the soil, and its culture generally. The public spirited character of that Society, warrants the belief that they will receive the communication with pleasure.

I recommend to your consideration, the payment in advance of our first annual subscription, to afford the means of defraying any little expenses incident to this proposition.

I propose for your consideration, the expediency of opening a correspondence with Mr. Vaughan, of Philadelphia, requesting him to furnish the Society with the Memoirs of the Philadelphia, and other similar Societies in the Northern States, and generally such other books on agricultural subjects, as our funds will enable us to obtain. The well known philanthropic character of this gentleman leaves no doubt that he will execute this commission with pleasure.

As most agricultural experiments and improvements require time to execute them, I propose for your consideration, the expediency of offering a premium for

the best field of wheat, not less than four acres, which must be ploughed at least twice, and harrowed in, the wheat not sown among corn; the grain to be thrashed out, accurately measured, and a fair sample produced to the Society, at their stated meeting, the fourth Thursday of July, 1816; certificates of the preparation of the ground and measurement of the wheat to accompany the sample. Public notice of this premium should be immediately inserted in the Pendleton Messenger, to which should be prefixed, a short statement of our Society and its objects; and inviting the assistance of literary, philosophical, and agricultural men. The premium should be a silver cup, of the value of — dollars, with a suitable inscription.

To these observations and propositions, permit me to add the expression of my gratitude, for the unmerited honour of the presiding chair, to which nothing indeed could have entitled me, but your partiality, and a zealous interest in the important object of this Society. I indulge however, a fervent hope, that by the blessings of Providence, a star may rise in the west, whose brilliant effulgence may illumine a midnight path, and attracting others within its orbit, may finally shed the happiest rays of light on the destinies of our beloved country.

THOMAS PINCKNEY, Jr.

President of the Farmer's Society.

J. T. LEWIS, Esq. Corres. Sec'y.

FOR THE AMERICAN FARMER.

RURAL ECONOMY—No. II.

Deep Ploughing.—Theory of the Growth of Plants.

The generality of good farmers are, in opinion at least, friendly to deep ploughing. Being myself an advocate for this opinion, I shall proceed to give as succinctly as possible, the reasons by which I am governed. The sun has a tendency to draw all fertility to the surface; but if that were all, deep ploughing would be of comparatively little importance; it has the power also to draw what is termed the strength of the land from the surface, and to leave the earth a barren waste. The sun and atmosphere, do not in a direct mode impart to the soil, any of those substances which are generally supposed to constitute the food of plants. They, only by the power of attraction, concentrate at the surface, those particles of fertility already in the soil. Take for example, two pieces of ground adjacent to each other. Let the substratum of each be perfectly similar. But suppose one to have been manured to such a degree, as to form three inches of rich mould on the top, and the other quite worn out: plough each 8 or 9 inches deep—the dirt on the surface of the one having been turned completely under, both soils will then have precisely the same appearance, and for the immediate growth of a plant, the roots of which do not extend more than three or four inches, exactly the same capacity. But let both pieces stand six or eight months, and it will be found that the soil, which was at first rich, will be good again as ever, and additionally so in proportion to the quantum of fertility, which the substratum contained, and which was made accessible to the extractive power of the atmosphere. If, however, the substratum contained no nutritive faculty whatever—if it were a perfect "caput mortuum," the land will not have gained one jot of fertility by the ploughing. And so with regard to the

exhausted ground—if it contained within the depth ploughed, any inherent principles of fertility, they will have been drawn to the surface—the land will have been improved, but if otherwise, in vain will have been all the efforts of the plough. A perfectly dead mass of matter, might be ploughed without any avail, even “till the cows come home.” A sand bank never can be bettered by stirring alone. But I have seen very little land, which even though apparently devoid at the surface, did not within the depth of six or eight inches, contain some principles of nutrition which by stirring, might be made perviable to water, and brought within the grasp of atmospheric power. I have seen consequently few soils that might not be ameliorated by an improvement in the construction and use of that first of Agricultural abettors, the plough. If ground intended for wheat, be fallowed early in the spring, it should be ploughed deep; little can then be lost by evaporation, before the time for sowing shall have arrived, the hot weather of a long summer, will only have had time to draw the forcing power of the earth to that place where, for the growth of all vegetation, it should be, to the surface. For the same reason the ground should by no means be cross ploughed. The power of nature would then by the mistaken operations of art, be in a great degree thwarted. We should never plough shallow early in the spring—it would only be exposing unnecessarily, the parched earth, already panting for water and crying for shelter. If we fallow late in the fall, let us reverse our mode of procedure, and root up only the rich dirt. The great monarch of day then struggles for a throne; he has lost much of his strength—he is “shorn of his beams.” What at one time would be a beneficial operation, at another with a reverse of circumstances, would be highly prejudicial. I now proceed with considerable diffidence upon the theory of the sustenance of vegetables. Plants, by their growth alone, are believed to exhaust the soil, if at all, but in a very considerable degree. The ground is found to be much injured after the growth of those crops in the ordinary cultivation of which, the soil is not only kept bare, but frequently stirred with a view to facilitate the expansion of the roots. Tobacco and corn stand “foremost on the file” of exhausters. These crops require the mode of treatment just mentioned. Clover does not exhaust at all, though cut several times, and every particle of its growth taken off. It even, then improves. For what reason? Because the earth is kept continually sheltered, and at the same time perforated by the strong tap root which this plant is known to possess. A shrub will attain considerable size in the box of dirt, without the smallest diminution from its original weight. Air, heat and moisture must then constitute food of plants. Though the earth be the principle means—the “alma mater” of vegetation, it is believed of itself to afford but little sustenance. It is the medium through which the other agents of nature act—it is to a plant as it is to man, a home—a resting place. Located in the soil, a vegetable expands its branches to the munificence of heaven, and agreeably to the extent of the donation it yields, from nothing to a hundred fold. If the season be good, we have a satisfactory product, if unpropitious, the reverse is our portion. If it be asked, “why does vegetation flourish more vigorously on rich than on a poor soil?” I answer, because a rich soil is better fitted for the expansion of the roots necessary to prop up the plant. Rich land is generally lighter than poor; it is possessed of that quality which in sugar or flour, we term life. It is porous enough to admit the necessary water to animate the roots, and has tenacity sufficient to prevent evaporation in a greater degree than soil of an inferior quality. The whole earth was made for “our footstool—to walk—to frisk and gambol on;” but we move with greater facility over a gravelled avenue than through a quagmire. If land, after being well ploughed and planted in corn, be covered with plank, with holes large enough for the stalks to shoot through, and interstices to admit the rain, it appears highly probable that it would produce for ten thousand centuries without the smallest deterioration of quality. An acknowledgment of the truth of this position, might in the cultivation of Indian corn, be of considerable service. We seldom see good crops of this grain amongst which grass is permitted to grow—the grass generally shoulders the blame. The effect is taken for the cause. The growth of grass is believed to be only an indication of the true cause of the sorry crop. It is a certain sign that the ground below, has not been sufficiently stirred—that it is too compact for the natural supporters of this prince of plants, to extend themselves. On the alluvial lands on some of our rivers, we find that the growth of grass impedes not at all the size of maize—not because the ground is strong enough to produce two crops at once, but for this plain reason, that being made of decomposed vegetables, it has the requisite tenacity at top, added to the advantage of being sufficiently porous, without the “foreign aid” of tillage. Could we devise a way of loosening the ground without killing or disturbing all spontaneous vegetation, the grass it is supposed so far from being an injury, would be a benefit, not only eventually to the soil, but to the growing crop without detracting except in a very small degree, if any, from the inherent fertility of the land, it would retain not only a sufficiency of moisture for its own support, but an additional quantity for the use of the crop. Though a great quantity of water is required for the support of vegetable life, it is to that evaporated as a “drop in the ocean.” A limited use of wheat straw or the green carpet of nature, are the only means within our reach of counteracting the gigantic powers of exhalation. Oats are of more rapid growth than any grain that I know of, except perhaps, buckwheat; and oats are never found to flourish well on a fresh ploughed soil; ground which has been cultivated the preceding year in corn, and exposed during both winter and summer, answers better, even though of inferior quality. Buckwheat on a fresh turned soil may do, but that grain is sowed when the sun is in meridian splendour. For the successful propagation of any crop, be the cause what it may, the fertility must be on the surface. Two or three inches of rich mould, even when mixed thoroughly by the plough and harrow, with as many more of substratum will produce very little; but if left on the top, it would be amply sufficient for the production of any thing: It turned completely under, so much the worse. Hence the great prepossession in favour of shallow ploughing. In all our efforts, we should endeavour to aid—not to counteract the operations of nature. That there are many evils in the world, is a lamentable fact beyond denial; but to each and every one, there is a proper antidote. A great author observes, that “imprudence and misfortune are synonymous terms.” Upon the proper use of those means which reason places at our disposal, depends in a great measure, our success or failure on the great theatre of life. The will of heaven has placed the fertility of this globe at the surface—and there, for all necessary purposes it should be. But to prevent evaporation—“Hic labor, hoc opus est.”—Nature has also pointed out the best means of doing this—Let the earth be covered with grass. But when we cultivate a crop, this growth must necessarily be destroyed.—True; if however we stir only the best part, which is invariably on the top, we may plant corn, and vegetation will rapidly spring up, when agreeably to the theory previously advanced, it should not be disturbed. To lighten the earth to a considerable distance, so as to hold in reserve a great quantity of water, absolutely indispensable to push forward vegetation, is in my humble opinion, the strongest argument in favour of deep ploughing. Could this object be accomplished without the necessity of turning the soil upside down, it would save much labour, improve it much faster, and retain it always at a minutes warning, subject to the requisitions of the farmer. All this is believed to be, at least limitedly, within our power. We have in this neighbourhood, an instrument called a “simple coulter,” in contradistinction to the common Dutch-plough, and all other ploughs to which coulters are prefixed. The appearance of the Dutch-plough, with the helve and shovel taken off, will be sufficient for any one to realise its construction. On land which has been in the first instance flushed shallow, this serves to give necessary depth; and with that view it is used. One horse will draw this on land which has been previously ploughed with a bare-share, six or eight inches, and probably much deeper with great ease. With the application of less power, it penetrates much deeper than any instrument whatever. It is now used by many of the best farmers here, almost exclusively, as a substitute for the common shovel-plough. Without disturbing in a considerable degree, either the grass or the surface, it gives the soil all those requisites for which I have contended. A coultering is found to be of great service to Timothy meadows. On fallow, I presume it might also be used to advantage. Let the ground be ploughed shallow, and before sowing give it depth by means of the coulter. The difference between the power necessary for deep and shallow ploughing is so great, particularly in dry weather, that the use of this in-

strument as recommended, would require no additional labour. That these opinions are in a considerable degree theoretical is readily granted—that they may be ridiculous is very probable—that they are materially at variance with the sentiments of the scientific world is certain: In any case I submit with pleasure to the “judgment of my peers.” Having premised this much by way of clearing off the rubbish from future investigation: in my next I shall take the “King’s Highway.” If we meet with fewer objects to please or satisfy the eye of curiosity, we shall at least have the consolation to know that we stand in less danger of being bewildered in the interminable labyrinth of useless argumentation.

R. B. BUCKNER.

Vint Hill, Fauquier County, }
Feb. 20, 1821. }

TO THE EDITOR OF THE AMERICAN FARMER.
ON THE GREAT VALUE OF RUTA BAGA.

MARCH 7th, 1821.

Dear Sir,

The communication from Wenham, which appeared in the Farmer, on the 4th of February, 1820, has been re-published in the last number of the Massachusetts Agricultural Journal.

As it comes again with all the imposing weight of its distinguished author, sanctioned thus by some of the most accomplished persons of America, I am led to fear, that the practical farmers of our country will abandon Swedish turnips without thought, as I most assuredly should do without hesitation, had not long experience made firm my impressions in their favour. If you still wish to print my notions, and think the playful style of my latter fitted for the grave columns of the Farmer, you are at liberty to publish them.

EXTRACT.

Well tried experience, accurate and repeated experiment, are necessary to establish the relative values, of the various esculent plants, which have been recently brought into field cultivation in America. I do not pretend to deny the importance of agricultural chemistry, nor to assume a position against the scientific agriculturists of Massachusetts, who have so ably written in support of carrots, mangel wurtzel and potatoes; but I am not willing to acknowledge that the data from Sir Humphry Davy, are sufficiently conclusive to overturn opinions founded upon the most vigilant investigation, which ample opportunity, or the utmost zeal can afford—nor am I quite satisfied, that in any case, the mere result of chemical analysis is the best test, of the value of certain combinations of matter in affording either nutrition, or “condiment” to animals.

The most eminent Pathologists, prescribe systems of diet, and exhibit preparations of medicine, with reference, rather to the force of experience, than the mere inductions of Philosophical research. Your venerable correspondent, decidedly asserts, that “if there be truth in the analysis of Sir Humphry Davy, the same weight of potatoes contains more than three time the quantity of nutritious matter

“that is found in Ruta Baga;” but he acknowledges, that whilst raw potatoes are useful in fattening cattle, they scarcely are eaten by swine—in fact, that until they have been subjected to chemical process in some shape, they cannot be successfully used in feeding them—and in aid of his opinions, quotes Hayes to prove, that potatoes in their effects are so potent, that they not only give robust health to the Peasantry, but even population to Ireland. Is it not likely then, that if Sir Humphry Davy were to become a feeder of swine, and were to consult his retorts alone for information, he would be aroused from his philosophic inductions by the outcry of his pigs, or curses on his bacon. It has been asserted, that the influence of a potato, upon the bowels of a hog, is very different from its effect upon those of a cow—is it to be contended then, that there is more affinity between the bowels of a bull, and those of an Irishman, than between the bowels of a hog, and those of a cow?

I am disposed to believe, that if the ingenuity of a chemist, and all the skill of a French cook were united, to adroitly prepare a delicious, and nutritious repast, for a pure Byfield hog, or a “clear” Teeswater heifer; they might exhaust all the sweets of molasses, and decompose half the beets of New England, before they could produce a good substitute, for the combination, which is found in every spear of tender grass.

I am prepared to acknowledge, “that Mr. Barney, an Englishman,” borrowed his practice from New England, whence I hope we may be ever disposed to borrow, all which relates to the promotion of individual happiness, or the advancement of national wealth—but I am persuaded that his early vocation as a butcher, his watchful and well known experience as a grazier, have fitted him better to decide upon the gut fat, and flesh of an ox, than all the chemists of the Royal Institution, and half the gentlemen farmers of America, with science and erudition at their aid. Supported by Barney, by Coke, and by Curwen, I cannot be brought to believe, in despite of three of my senses, that my bullocks and cows put milk in their udders, or lay flesh on their haunches, by means of “condiment” only in support of “sweet” tasting barley straw.

We may confidently rely upon every analysis by Sir Humphry Davy; and although he states that “the red beet contains 121 parts in a 1000, of saccharine matter, or sugar—the white beet, 119 such parts”—he does not, I think, declare, “that any of them can convey more than double the quantity of nutriment that is afforded by Ruta Baga,” to cattle or swine—for he distinctly asserts, (immediately after his table of soluble or nutritive matters) “it is probable that the excellence of the different articles as food will be found to be in a great measure proportional to the quantities of soluble or nutritive matters they afford; but still these quantities cannot be regarded as absolutely denoting their value. I have been informed by Sir Joseph Banks, that the Derbyshire Miners, in winter, prefer oat cakes to wheaten bread, finding that this kind of nourishment enables them to support their strength, and perform their labour better.”

But the table had shown, that wheat contained 959, whilst in oats, were discovered but 743 nutritive parts. Again, in his first lecture he further observes, “the compounds in vegetables really nutritive as the food of animals, are very few; farina, or the pure matter of starch, gluten, vegetable jelly, and extract. Of these, the most nutritive is gluten, which approaches nearest in its nature to animal matter, and which is the substance that gives to wheat its superiority over other grain. The next, in order as to nourishing power, is sugar, then farina, and last of all, gelatinous and extractive matters.”

Murray, page 100, volume 4th, without reservation, pronounces that “fecula is sometimes employed in its pure state medicinally, from its nutritious quality, and from being easy of digestion. Sago and sallop are feculas of this kind; again, in the next page, Fecula is, of any variety of vegetable matter, best adapted to the nourishment of animals; and it forms the principal part of all the seeds and roots which are used as food by man.” Its nutritious power is well shown, by the fact, that some of the most nutritive of these, as rice, or the potato root, contain no other principle that can contribute to this, but fecula.

The evidence of chemistry has not established the case of your ingenious correspondent, nor would “taste” more effectually confirm the position he has taken, for sugar of lead might be found “manifestly sweeter” than bread, mangel wurtzel, beets or potatoes.—Yet Mr. Hayes would not recommend lead to the use of his countrymen, for the purpose of health, population, or diet of easy digestion.

The analysis given so far as it is quoted, might be brought to prove, that Ruta Baga contains double the quantity of nutriment that is afforded by red beets, white beets, parsnips, carrots and potatoes; for it cannot be objected that Murray is wrong, or Davy not right, and yet we are told, that fecula is of any variety of vegetable matter best adapted to the nourishment of animals; and Davy has proved that the favourites at Wenham contain twice as many parts as Ruta Baga of Saccharine matter, which is not fecula, or starch. It thus remains to be proved, that Ruta Baga does not contain twice as much gluten, fecula, or that which is really most nutritive for the purposes of cattle or man. The chemists have shown, that three drops of Prussick acid applied to the tongue of a dog, produced instant death, yet they assure us that the same tongue of the same dog, contained the elements from which Prussick acid is made.

The fragrant blossom of a peach, is another source of its production, yet no philosopher, farmer or writer will say that peaches are poisonous, or that their blossoms are dangerous, because the skill of a chemist can make them kill either hog, bull, or dog.

Whilst we are soaring by the lights of philosophy, it is madness to fly from the tracks of experience, and absurdly pursue that, which to mortals can never be known.

The knife of an Anatomist, or the laboratory of a chemist might be in vain put in requisition to trace in the gastrick juice or bowels of a pig,

the peculiar combination, which enables it to digest almost every thing which vegetates or moves, whilst the stomach of an ox, or system, of an elephant, would be disordered by a single breakfast of oysters, with the aid, even of "boiling," or of sugar, beets, "condiment," carrots, potatoes or sauce.

CURWEN.

COMMUNICATED FOR THE AMERICAN FARMER.

By G. W. JEFFREYS, Esq.

Virginia, Port Royal, April 16, 1819.

DEAR SIR,

I wish it was in my power to give you any satisfactory answer to your letter, in relation to the given labour necessary for a farm of a given size; but so many varieties exist, both in the nature of land and labour, and my experiments have been so constantly subject to fluctuations in the circumstances of both, as to have subjected me to temporary and fluctuating computations, and to have precluded me from even attempting to ascertain any settled results. Whatever is said in Arator, must be considered as applicable to a level farm, of a light soil, of easy tilth, having no gullies, requiring no clearing, and but little draining; and the labour there spoken of must be calculated as attended by a sufficient team.

The meadow oat grass continues to answer my expectation. A large field on which it was thinly sown for the sole purpose of improvement, indicated by its last year's crop its fitness for that object. Another now promises still more. It is hilly land, and exhibits a great cover for its degree of fertility. I have ascertained that it does not live or sprout so well in the fall sown with wheat, as when sown in the spring mixed with oats and clover seed.

My manuring from the resources of the farm, exclusively of gypsum and enclosing, extends now to about 160 acres annually. This year it would have considerably exceeded that quantity, if I had not determined to manure a body of very poor land, hitherto neglected as unworthy of the expense, which required sixty loads of farm pen litter to an acre.

My shifts are subject to some small irregularities, from ploughing up sections of high or low land grass, to clean and re-sow them. The prominent divisions contain about 250 acres each. About eight barrels of corn to the acre has been the produce of the two last years. In one, my wheat was greatly injured by fly, in the other by frost; so that the produce was only as many bushels. Between 12 and 15 may be generally expected. Much of my land is very sandy.

I have long sown all my shifts in some kind of grass. The stiff parts produce fine clover, often partially cut for soiling, hay or seed. Of permanent highland meadow oat, I have only about 40 acres at present, but I am hastening to increase the quantity. Of lowland red top meadow, I had until this year about 60 acres, most of which I have ploughed up for corn, designing to convert all my drained land, about 150 acres, into a course of corn, oats and grass, two years grazing—and begin again. This re-

solution arises from a preference to the meadow oat for hay, to any hay to be made on reclaimed lands. And I sow oats after corn on reclaimed lands, because the crop is infinitely more certain than wheat, and because the grass seeds sown with oats succeed better than those sown with wheat.

Enclosed are a few of the pumpkin seed you wish for. They are of the best kind I have tried, but I do not know that they are any thing more than the common sort, nor is it improbable that a better species may be found.

I regret that these answers to your questions are of so little value, as it would have given me much pleasure to have been useful to a gentleman so ardent in an object so useful.

I am respectfully, sir, your most obedient servant,

JOHN TAYLOR.

MANAGEMENT OF CALVES.

Successful experiment of rearing calves without Milk.

From the transactions of the Bath Society, volume 5th.

TYTHERTON, Dec. 3rd. 1789.

SIR—The following is as near a calculation of the expenses of rearing my Calves without milk, as I can at present assert. In the year 1787, I weaned 17 calves; in 1788, 23 and 1789, 15. I bought in 1787 three sacks of linseed—I put one quart of the seed to 6 quarts of water, which by boiling ten minutes, became a good jelly; this jelly is mixed with a small quantity of the tea of the best hay steeped in boiling water.

Having my calves to drop at different times I did not make an exact calculation of the expense of this hay tea; but out of my three sacks of seeds, I had better than two bushels left at last—I gave them the jelly and hay tea, three times a day. To the boy who looked after them 6d. per day; the price of the linseed was 4s. 6d. per bushel; the whole three years seed, 2l. 5s. My calves are kept in a good growing state, and are much better at this time than my neighbour's, that are reared by milk—they do not fall off so much when they come to grass.

I am, &c.

THOMAS CROOK.

To make Hay Tea for Calves.

Take about a pound of red clover hay, well got in; and 6 quarts of clear spring water; boil them together till the water is reduced to four quarts; then take out the hay and mix a pound of barley, oat, or bean-meal, amongst a little water, put it into the pot or caldron, while it is boiling, and keep it constantly stirring until it is thickened. Let it cool, then give it to the Calf, adding as much whey as will make a sufficient meal. This is a cheap way of rearing Calves, and the valuable article of milk may be saved for other purposes.

Parsnips productive of Milk in Cows.

Parsnips cause cows to produce abundance of milk; and they eat them as free as they do

oil cake. Land, 7l. an acre, in Guernsey is sown in with parsnips to feed cattle, and the milk is like cream. Sheep when lambing, fed with them, produce much milk. They are improper food for horses, subjecting them to blindness.

To stain Wood a fine Black.

Drop a little oil of Vitriol into a small quantity of water, rub the same on your Wood, then hold it to the fire until it becomes a fine black; and, when polished, it will be exceedingly beautiful.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 23, 1821.

Our subscribers are reminded that according to the invariable terms of this paper, their subscription is to be paid on or before the first day of next month—for volume third. We entreat them to recollect that every thing depends on their punctuality, and that the merits of the AMERICAN FARMER whatever they may be, have arisen from the promptness with which calls of this kind have been met by its patrons. It is earnestly desired, that on the perusal of this notice, each subscriber will put the amount in a letter addressed to the Editor, who agrees to take all risk of mail.

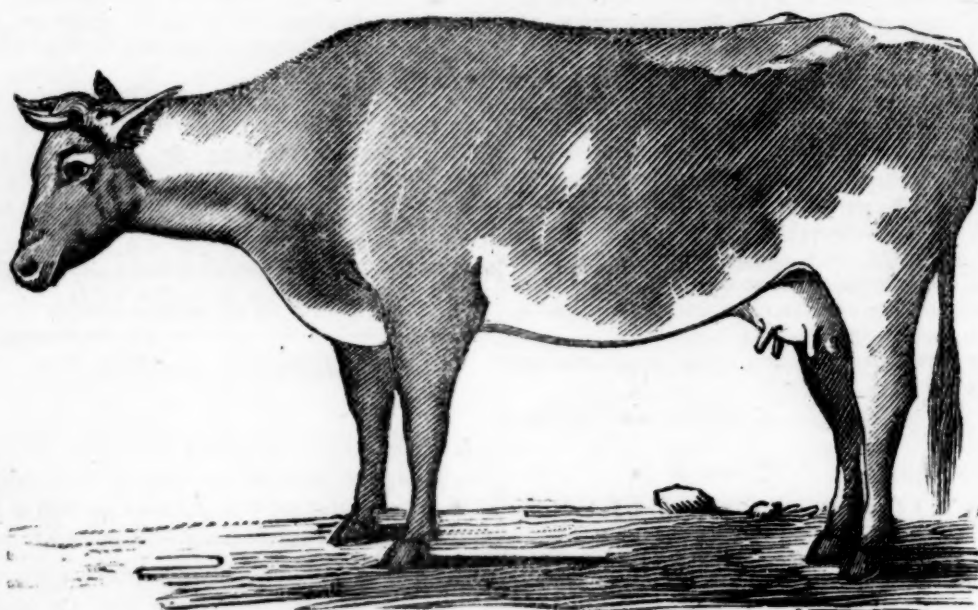
Baltimore, March 23, 1821.

PRICES CURRENT.

—FLOUR, from the wagons, \$3 37½—WHISKY, from do. 22 cents per gallon—WHEAT, 62 to 66 cents—BARLEY, 45—OATS, 25 cents—CORN, white, 23 to 24 Yellow 26—COD FISH, per quintal, wholesale \$3, retail do. \$4—NEW ENGLAND BEANS, per bushel, \$1 12½—do. PEAS, 75 cts—GROUND PLASTER per ton 8 50, per barrel, \$1 45, per bushel, 35, in the stone per ton, \$6 50—NEW ORLEANS SUGAR, \$8 75 to 10—MUSCOVADO, do. \$7 50 to 9 25—AMERICAN WHITE LEAD, \$12 50—GROUND, do. \$13 a 14—LINSEED OIL, 75 cts.—FEATHERS, 40 to 45 cts—HAY, per ton \$16—STRAW, do. \$8—N. E. POTATOES, retail 50 cts. pr. bu.—LIVE STOCK, 5 to \$6 c.—BEEF, prime pcs. 8 to 10 cts.—CORN BEEF, 7 cts—MUTTON, 8 to 10 cts.—HAMS, 10 to 12 cts—MIDDLINGS, 8 to 10 cts—BUTTER, 20 to 25 cts.—CHEESE, 8 to 10 cts. per lb.—TAR \$1 75—SOFT TURPENTINE, \$2—PITCH, \$2½—ROBIN, common 1¼—bright do. \$3 per barrel.—VARNISH, 25 cts.—SPIRITS TURPENTINE 33 cts. per gal.—COTTON, good Upland, 15 to 16 cts. per lb.—RICE, \$3 to \$3½—SHIP and flooring PLANK, \$25 to 27, —SHINGLES, best \$8—common \$3 a 4½ p. M.—OAK wood, \$3 50—HICKORY, \$4 25 per cord—CLOVER, seed \$7—AM. ORCHARD, grass do. \$4—English do. or Cocksfoot, do. \$8—HERDS, do. \$3—TIMOTHY, \$5 SANFOIN, \$10—MILLET, \$2 per bushel—LUCERN, 75 cts.—SWEET SCENTED VERNAL \$1 50 cts.—COW GRASS 75 cts—TREFOIL, 50 cts. per lb.—RUTA BAGA, 75 cts—MANGEL WURTZEL, \$1 75 cents per pound.—CABBAGE, seed, 25 to 37½ cts.—CAULIFLOWER, 75 to 100 cents per oz.—spring TARES, \$8 per bu.—PEAS, 25 to 75 cts. per quart—ONION seed, 20 to 25 cts.—LEEK, 31 to 37 cts.—short orange CARROT, 12½ cts.—PARSNIP, 12½ cts.—LETTUCE, 25 to 75 cts.—RADISH, 12½ to 31 cts.—BEET, 12½ cents—BROCCOLI, 31 to 100 cts.—CUCUMBER, 37 to 75 cts. per oz.—TURNIP seed 50 to 125 cts. per lb.

No sales of Virginia or Maryland Tobacco the present week.

FROM THE PLOUGH BOY.



THE HOLDERNESS COW.

Recently imported by Mr. G. W. Featherstonhaugh.

This Cow is that species of the *short horned* breed called the Holderness.

They are of a large, size, but are particularly valued for the remarkable quantities of rich milk which they give. It is on this account that the breed prevails generally in the rich county of Middlesex, for the supply of the city of London. With a sufficient quantity of succulent food, and regular milking three times a day, they yield from forty to fifty quarts of milk.—The animal, of which the above is an imperfect representation, gave, during an uncommon stormy passage of 48 days in the late winter months, a constant profusion of milk, and on her arrival at New York, being much reduced in flesh, and her hide extremely wounded in many places, by chafing against her pen, gave sixteen quarts at one milking. She remained two or three days in the city of Albany, and was inspected by numerous persons, amongst whom were some of the most respectable butchers of the place.

They were unanimously of opinion that she was the most remarkable animal they had ever seen. From the centre of her horns to the end

of her buttocks, she measures seven feet and a half, and two feet three inches across her hips. Her hide is mellow to the feel, and perfectly silky without any coarse hairs. Her head and neck are small and remarkably graceful, her ears uncommonly large and smooth, accompanied with a singular transparency. Her carcass is well barrelled out and compact, her legs and tail corresponding in fineness to her head and neck. The butchers who inspected her, observed, that they never saw any animal with so little offal. She was judged to weigh twelve hundred if in condition. She was selected from the first stock in England, and is with calf by a descendant of the famous bull Comet, who sold for a thousand guineas. She is at present removed to the farm of the proprietor in Duanesburgh, who expects a bull of the same breed in the course of the spring.

— An imported bull of this breed is on his way from Boston, coming to the editor of the American Farmer, for his stock farm. He will not be let this season to more than twelve cows, at \$5 each.

Ed. Amer. Far.

The thorough bred and beautiful Horse

CLIFTON.

As some time must necessarily elapse before the contemplated importation can be made from abroad, for the melioration of several species of our domestic animals, in pursuance of the plan which has already been explained. I have endeavoured in the mean while to procure the best materials for that purpose which are within my reach in this country. To accomplish the highest attainable improvement in the form and action of the HORSE for the turf, saddle and harness, I have for the present selected the high bred horse CLIFTON, raised by Joseph Lewis, Esq. of Virginia, from the very best stock of running horses in that state. He is a beautiful chesnut sorrel, full 15 1-2 hands high, with great bone and muscle, six years old last May.

PEDIGREE—on the side of the sire. Clifton was

got by Dr. Brown's celebrated running horse Wonder, out of a thorough bred Diomed mare. Wonder was got by the imported horse Wonder, he by Florizel, his dam Zacharissa, got by Matchem, out of Aurora, by the Duke of Northumberland's Golden Arabian; Florizel was got by Herod out of a Cygnet mare, her dam by Cartouch. Ebony by Childers.

On the dam side. Iris, the dam of Clifton, was got by the imported horse Sterling; her dam by the imported horse Cæor de Leon; her grand dam was Mr. Mead's celebrated running mare Oracle; who was got by the imported horse Obscurity; her g. g. dam by Celer; g. g. g. dam by the imported horse Partner; her g. g. g. dam by the imported horse Janus; her g. g. g. g. dam by the imported horse Valiant; her g. g. g. g. g. dam by the imported horse Jolly Roger, out of an imported mare, the property of Peter Randolph, Esq.

In support of the fine blood and high promise of

the horse I have selected for my stock farm for the ensuing season, I have the satisfaction to submit the following voucher from very high authority:

Washington, March 12, 1821.

DEAR SIR—I have extracted, as you requested, from the English Stud Book, the pedigree of the imported horse Wonder, the grand sire of your young horse Clifton, which is annexed. The pedigree of your horse on both sides, is equal to any in America. His dam Iris, partakes of the most approved crosses for the turf, in Virginia; and his sire by the imported horse Wonder, is inferior to none in England. I was very much pleased with the appearance of your horse, and it is, I think, to be regretted, that you have never trained him for the turf, where I think, from his blood and form, he would have made a distinguished figure; his fine appearance, and excellent blood, certainly entitle him to the attention of those who wish to improve the breed of good horses, and I have no doubt, under the auspices of the gentlemen who will patronize him, that he will, as he certainly ought, to make a good season,

Yours most truly, JOHN TAYLOR.

To Joseph Lewis, Esq.

Clifton will stand at Govanstown, on the York road, on Mondays, Tuesdays, and Wednesdays, and the remainder of the week at the Maryland Tavern, kept by Mr. John Stone, on the Frederick Turnpike, four miles from Baltimore, at \$25 for each mare, which sum may be discharged by sending \$15 dollars with the mare, and \$1 to the groom, the money may be paid either to Mr. Wooden, Mr. Stone, or to the subscriber. JOHN S. SKINNER.

— My imported Maltese JACK, SANCHE, will stand at the same times and places, at \$12 the season, to be discharged by the payment of \$8 if sent with the mare. He is 14 hands high, 8 years old, and his foals 15 hands by small mares.

THE ALDERNEY BULL, MARK ANTONY.

— The very superb full blooded Alderney Bull, MARK ANTONY, is now at my stock farm BOVALLY, four miles from town, on the Frederick road, and will be let to cows at \$3 each; the money to be in all cases sent with the cow, and to be paid to R Southron, manager of said farm.

Mr. Lawrence, a very celebrated English Agriculturist, thinks the "Alderneys are amongst the best milkers in the world, as to quality, and in that respect are either before or immediately next to the Long Horn: but that in weight of butter for inches, they are far superior to all. He has been assured by a respectable friend, that an Alderney strayed cow, during the three weeks she was kept by the finder, made nineteen pounds of butter each week, and the fact was held so extraordinary as to be thought worth a memorandum in the Parish books." The same fact is stated by many of the most respectable English writers.

CHOICE STOCK, FOR SALE.

Two Bull Calves, one six weeks old, the other four weeks.

They are three quarters Holstein, (Holderness) and one fourth Alderney, warranted pure, and out of cows that milk 20 quarts per day. Inquire of the editor of the American Farmer.

ALSO,

A half blood Alderney BULL, between two and three years of age, price \$80, a very gentle and beautiful animal, and in appearance approaches very near to the full blood Alderney. Inquire of the editor of the American Farmer.

BALTIMORE,

PUBLISHED EVERY FRIDAY,

BY JOHN S. SKINNER, EDITOR.

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